14 November 2016

VIA ECFS   *NOTICE OF EX PARTE*

Marlene H. Dortch
Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

<u>**Re: PS Docket 15-94**</u>

Dear Ms. Dortch:

Monroe Electronics was asked to meet via conference call with representatives from the FCC PSHSB for the purposes of answering various questions posed by the FCC in regards to EAS and EAS Participant architectures in relation to the above captioned proceeding. On November 3rd, 2016, this meeting occurred between Edward Czarnecki, representing Monroe Electronics, and Gregory Cooke, James Wiley, Jane Kelly, Austin Randazzo, Steven Carpenter and Jessica Krentz, from the FCC.

Monroe Electronics currently provides CAP/EAS equipment to the large majority of the cable TV industry, over 75% of the U.S. broadcast television industry (via our Digital Alert Systems subsidiary_, and a significant number of broadcast radio stations. We also provide CAP and EAS alert origination systems for numerous states and counties across the nation. Our comments are therefore primarily attuned to the concerns of the video programmer segment in these comments, however we also reflect on the emergency alert origination and radio broadcast segments. Below is a summary of our discussions, organized by general topic area:

Programmed Channels.

- In response to a question on the definition of certain terminology, we expressed our understanding that that the Cable Act definition of "video programming" is *not* coextensive with "Programmed Channels" as the term is used in Part 11 rules. The usage of the term of "Programmed Channels" in industry refers to a much broader range of data services and functions (such as DOCSIS). "Video

programming" may be a portion of "programmed channels," but the two terms are not synonymous, and cannot be used interchangeably.[1]

- We suggested that it would be appropriate for the Commission to refrain from creating definitions or redefining terminology where there are already existing known usages in industry, such as the cable industry's existing usage of "programmed channels" and "video programming" as distinct terms. It is understood that the FCC's current EAS rules apply to channels that are used to deliver video programming as part of a Title VI cable service, but not to cable capacity used for other purposes, such as Internet access service. We suggested that the FCC should maintain that distinction.

- We noted the potential for an enormous cost impact if the interpretation of a definition goes awry (e.g., it may cause confusion and unnecessary spending if the definition is not precise or subject to interpretation). Moving emergency alert capabilities beyond video programming delivered as part of a Title VI cable service into other services is something not contemplated under current regulation or the Communications Act, nor is this a capability that may be technically feasible with some cable system architectures, and may be cost prohibitive in other architectures (requiring extensive software upgrades, and potentially system redesigns, including replacement of core systems).

Emerging Video Technology.

- In response to questions regarding over-the-top apps and video programming on tablets we noted that this area reflects various design challenges, including those related to portability and mobility. We also drew a distinction between those apps that provide services analogous to video programming, vs. those that may be more appropriately be considered data or broadband apps.

- We expressed the clear distinction between MVPD apps that deliver cable or other MVPD services in the home and that are therefore subject to EAS obligations, versus those apps that deliver video over the top of an Internet connection. Internet based applications are not subject to EAS requirements.

Multilingual.

- Monroe Electronics was the first provider of a CAP/EAS origination system for authorities to present a multi-lingual CAP message with multiple language audio resources. This capability has already been utilized by several jurisdictions, including the regular origination of messages in English and Spanish, with the respective audio components. Monroe Electronics was also the first EAS manufacturer to incorporate multiple language support as an option for broadcasters, with text-to-speech, and standard EAS message translation. This capability provides broadcasters with the *option* of airing alert messages in one or more languages, including providing basic transcoding of standard EAS alert messages English into any of a dozen languages.

- At the same time, as noted in our Reply Comments previously filed in regards to this proceeding, we reiterated our longstanding opinion that no additional regulation in this area is necessary at this time, and that any multilingual services provided by EAS Participants should remain voluntary.[2]

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[1] Video programming can be seen as a subset of programmed channels, but not all programmed channels are related to video programming.

[2] See Reply Comments of Monroe Electronics In Regards to the Notice of Proposed Rulemaking, PS Docket 15-94, at p.4. *"However, we stress that some technologies and approaches for multilingual alert accessibility are at their very beginning stages. We strongly feel that any additional regulation or action by the Commission would be*

- Monroe was also a member of the FCC's Communications Security, Reliability and Interoperability (CSRIC V) Working Group 3 (Emergency Alert System), and actively participated in the EAS Multilingual Alerting subgroup, where our suggestions on multilingual EAS were incorporated as recommendations from the group - specifically that no additional regulations pertaining to multilingual alerting are necessary at this time, and that multi-lingual alerting should remain a voluntary activity for EAS Participants.[3]

- In order for EAS Participants to be able to support EAS alerts in any language included in the CAP message, the simplest method is for the alert originator to include the alert text and audio resources into the CAP alert message, with each language contained in its own "information block." This is a method that is provided for in the CAP standard, US IPAWS CAP profile and the EAS-CAP Industry Groups (ECIG) guidelines. This is also a method that is utilized by FEMA IPAWS, and demonstrated in its numerous regional NPT alert tests, as well as the recent national NPT alert test, where both English and Spanish were sent in the same message. Language-enabled receivers had the option of processing the English message, the Spanish message, or both. The broadcaster can select any language to display as the primary text of the message. ECIG guidelines allow alerts to display a second language after the primary alert is displayed (i.e. as "post alert audio" after the EAS end of message [EOM]).[4]

- Our view is that there are no changes required in either regulation or standards to allow alert originators to include any language they wanted as secondary/tertiary alert language. The FCC's rules had already addressed that issue by incorporating both the FEMA IPAWS CAP profile and the ECIG CAP-to-EAS guidelines.

- We also noted the functionality provided by our EAS devices, where our DASDEC™/One-Net™ equipment can provide text-to-speech (TTS) in various languages, should the original CAP message not include an audio resource, or if the provided audio resources is not usable. In this case, TTS can serve as a critical backup when the audio resource is missing, inaccessible, cannot be downloaded in a timely manner, or is otherwise unavailable.

- We also noted our method of providing short standard EAS messages in languages not provided by the originating authority. This is a useful method to allow a broadcaster to provide basic emergency information to their audience in a particular language that the alerting authority has not included. We stressed, however, that such functionality should be utilized on a purely voluntary basis by the broadcaster.

Accessibility.

- We strongly supported the use of TTS by the user (EAS Participant) as a backup for unavailable/corrupted audio files in CAP/EAS messages. As above, TTS can serve as a critical backup when the audio resource is missing, inaccessible, cannot be downloaded in a timely manner, or is otherwise unavailable. Without TTS as a backup, an EAS message with missing or corrupted audio

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premature at this time. Additionally, because the very early stage of development and experimentation, we caution that the experimental use of such technologies should be voluntary and at the discretion of the EAS originator, and the various EAS Participants."

[3] CSRIC Working Group 3, Emergency Alert System, Final Report on Multilingual Alerting Recommendations stated that *"In general, WG3 found that multilingual capabilities, especially in the area of message origination, are still in the early stages. The experience pool is too shallow to inform Best Practices. As such, it is too early to consider any additional regulation or requirement pertaining to multilingual alerting."*
[4] See Reply Comments of Monroe, at pp 3-4.

would simply display as text over video programming systems, or tones without any further information over audio/radio systems.

- In response to the concept of a national or central TTS system, our thought was that this capability of audio generation should rest with the respective alert originators themselves, while relying on text to speech as a backup or failsafe by EAS participants, in case that audio is unavailable. Today, we _already_ see numerous local and state CAP origination systems generate their own audio (whether TTS or human voice) and send as either embedded audio in the CAP file, or as a link to outside web server. We suggest that caution should be taken with any proposal like a national or central TTS system that may interfere with the operation of IPAWS CAP origination systems that are already deployed and successfully operating. We are also of the opinion that such local alerting is the primary responsibility of state, local, territorial and tribal authorities, and the choice of TTS should reside with this entities, as should the choice to originate multilingual messaging with TTS (if at all, and in what languages).

- On a technical level, we noted that there are critical nuances to the usage of TTS, with accomidating regional dialects and pronunciations being just one factor. As an example, heteronyms can be a major challenge to TTS systems (words that are spelled the same, but have different pronunciations). Heteronymic place names are a specific example of where a national TTS system will encounter difficulties. The town of Paris, New York is pronounced in the Americanized (pæɹ.ɪs) while Paris, Maine is pronounced akin to the homophone _pa-ree_ (pæɹ.is). There are hundreds of other examples of local place and street names which require regionalized (and even localized) pronunciation that a national "generic" national TTS system may find difficult to support. The result would be sub-optimal TTS translations of potentially critical place names and references. Localized origination of TTS is much preferable, providing a greater ability to accommodate regional variations in pronunciation, heteronyms and other TTS challenges a national system may not support well.

- Many originating authorities _already_ have tools that support TTS or human voice recordings in conjunction with their CAP messaging.[5] A national or central TTS system would be superfluous to – and may even interfere with – the more effective functioning and usage of CAP tools that already exist, and are already being used by state and local alert originating authorities. Such a capability would also rely on EAS participant TTS to provide audio, if the original audio is missing or corrupted.

- As an example, our CAP/EAS origination tools (the DASEOC™) allows originating authorities to use TTS of the text of the CAP message, or enables the authority to record their own voice for use in the CAP message. In either case, the audio resource file can be embedded into the CAP message itself, or included as a URL reference to an outside media server. As with the multilingual discussion above, this process can be done in any number of languages, simply and cost-effectively for the alerting authority.

Equipment Maintenance

- In response to the question of what the technology or equipment refresh cycle is on current CAP/EAS equipment, we noted that this can and will vary by industry segment. Because modern CAP/EAS equipment differs from older legacy EAS equipment, including the usage and processing requirements, we suggest a general range of 5 to 7 years as a CAP/EAS equipment replacement cycle. This is well inside the norm for common hardware lifecycles, where systems such as servers and networking gear can be expected to have an average life cycle of 5 years.

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[5] See, for example, _IPAWS Alerting Best Practices Webinar Series: Multilingual Translation Technology for IPAWS Alerts_, August 19, 2015, at https://complete-em.com/NewsFilePath/964049/63575010568000000014.htm

- Some EAS participants do tend to maintain a regular equipment refresh cycle, again in the 5- to 7-year timeframe, in tune with industry recommendations for this general type of equipment.
- Other EAS participants, desirous of being economical IT managers, are able to maintain their equipment for considerably longer. We are aware of DASDEC-I units – originally deployed in 2004 – currently being operated at several facilities. With almost 12 years in service, this is more than twice the recommended lifecycle.In either case, we stressed the need for EAS Participants to keep their equipment in good operating equipment, particularly as this equipment reaches the end of the manufacturer's recommended lifecycle.
- In response to the Commission's question on what costs or budget that EAS Participants should plan for their EAS equipment, we suggest that (aside from equipment replacement or value-added options and upgrades) a provisional or contingency budget of $250/year would be more than adequate to address potential software costs, aside from any planned additions of optional features or other optional upgrades. Again, replacing EAS equipment 5-7 year cycles would be advisable.
- In response to questions of maintenance requirements and security, maintenance of EAS equipment should be an integral function of any EAS participant's overall IT program. While we do encounter EAS Participants who have not properly secured their equipment, such as not using firewalls, most are endeavoring to properly secure their overall IT infrastructure, including EAS equipment. Besides the procurement of a firewall (assuming an EAS participant does not already have one), all other security maintenance should be just labor (e.g. changing a default password, which DASDEC software version 3.0 forces a user to do anyway). Again, proper maintenance should be routine and a part of the EAS Participant's IT checklist.

Selective Override

- In response to the Commission's questions on selective override we provided a basic overview of various cable architectures, including analog, digital, next gen IP cable, and IPTV.
- The Commission noted that they had seen a number of examples of franchise agreements where selective override was provided for. We would note that selective override may have been implemented by certain cable operators, whose infrastructure permitted this option, and who had already been implementing it as part of a planned multi-year infrastructure project. Selective override may have been included in other franchise agreements "if technically feasible," however, the selective override capability was not feasible without significant infrastructure changes at very substantial cost.

Forced Tuning

- While there is some overlap in the discussion between selective override and forced tuning, these are distinct issues. The Commission should be aware that significant portions of cable plant are designed around "forced tuning," and this process may not change even if selective override is implemented.
- Forced tuning is a function deeply embedded in cable plant, from the headend to the set-top box. A change from forced tuning would have an enormous economic impact, since not only upstream cable plant would be impacted, but hundreds of thousands (if not millions) of set-top boxes (STBs) would potentially need to be updated or replaced.

EAS Validation based on time:

- In response to the Commissions question of validation of messages depending on time, we noted that EAS gear should already do this. For example, in the case of the DASDEC, the EAN is treated as valid as long as it is received before the expiration time of the message (that is, JJJHHMM – TTTT). Alerts are logged, but not transmitted, if they have expired.
- To accommodate minor clock drift or setting error on the part of the originator or the EAS Participant, we also allow a narrow window of validity in the unusual case that the EAN message is received before the JJJHHMM time value in the received message. We strongly object to overly broad or arbitrary windows around an alert, such as a valid window of plus/minus 24 hours of the message JJHHMM time.

Pursuant to Section 1.1206 of the Commission's rules, a copy of this letter is being filed in ECFS.

Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ Edward Czarnecki

Edward Czarnecki, Ph.D.
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Monroe Electronics, Inc.

cc: Gregory Cooke
        James Wiley
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